## **Kansas Utility-Sponsored Energy Efficiency Programs**

KEC Staff Summary Based on Input from KEC Energy Conservation & Efficiency Committee Members, December 2007

This summary of the energy efficiency programs offered by Kansas electric utilities was compiled as preliminary information for the 2007 KEC Energy Conservation & Efficiency Committee and is by no means a comprehensive survey of all programs offered by the state's investor-owned utilities, municipal utilities, and rural electric cooperatives.

Table 1. Summary of energy efficiency programs offered by Kansas utilities (KCBPU = Kansas City Board of Public Utilities; KCP&L = Kansas City Power and Light; MWE = Midwest Energy Inc.; Westar = Westar Energy).

Utility Name	Program Description (Type)	Target Market (customer class)	Annual Budget (averaged over program life)	Estimated Annual kW and/or kWh Savings	Estimated kWh Impact (fuel switching, etc.)
KCBPU	Residential A/C conversions; retrofit existing furnace system with an add-on heat pump (AOHP) that works as an A/C or heater to assist the furnace (peak reduction)	Residential	\$45,825	201 kW @ peak (2006 program year)	
KCBPU	Residential heat pumps; install new all-electric heat pumps (AEHP) that works as an A/C and furnace (strategic load building)	Residential	\$328,925		5,771,916 shoulder kWh
KCBPU	Commercial electric hot water tanks (strategic load building)	Commercial	\$5,503		123,408 shoulder kWh
KCBPU	Commercial resistance space heat(strategic load building)	Commercial	\$86,430		9,219,200 shoulder kWh
KCBPU	Commercial heat pump (strategic load building)	Commercial	\$31,975		596,841 shoulder kWh
KCBPU	Heartland Utilities for Energy Efficiency – collaborative program with KC Metro utilities to promote energy education and other actions, mainly targets low income residential	Residential, Commercial	\$3,015		
KCBPU	Consumer brochures, bill stuffer/newsletters	Residential, Commercial	\$40,500		
KCBPU	Web site: education estimate @ 50% of cost	Residential Commercial	\$49,245		
KCBPU	Street light lamp conversion: metal Halight to High Pressure Sodium (HPS)	Other			
KCBPU	Traffic signals, convert bulbs to LEDs	Other			
KCBPU	4KV distribution system conversion	Other, System			

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KCBPU	Electric League, Lighting Energy Efficiency /Safety Education,Motor Control	Other	\$1,050		
KCP&L	Affordable new homes – a partnership between KCP&L and builders to provide energy efficient homes to low-income families. Builders will be offered incentives ranging from \$100 – \$800 per energy efficient improvement in a home.	Residential			
KCP&L	Low-income weatherization – working with Community Action Program (CAP) agencies, KCP&L will provide weatherization for families earning up to 185% of the federal poverty level. Renters can participate if the landlord pays 50% and does not immediately raise rent.	Residential			
KCP&L	Residential online analysis program – customers can view daily, weekly, and monthly usage, receive tailored advice for reducing usage, and compare themselves to an average similar household.	Residential			
KCP&L	Home performance training – provides a whole-house energy assessment and infrastructure to follow through on recommendations made by the assessment.	Residential			
KCP&L	Change a light, change a world – KCP&L provides funds to state agencies working with the EPA and Energy Star. These funds are usually channeled into point of purchase rebates for compact fluorescents (CFLs).	Residential			
KCP&L	Cool homes program – provides incentives to offset the higher purchase cost of energy efficient central A/C and heat pumps. This program will target old equipment for early replacement and is intended to encourage contractors to use energy efficiency as a sales tool.	Residential			

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KCP&L	Energy Star homes – offers technical services and financial incentives to builders in order to achieve the mandatory target of exceeding the 1993 national Model Energy Code by at least 30%.	Residential			
KCP&L	C&I online analysis program  – business and non-profit customers can view daily, weekly, and monthly usage, analyze what end use makes up what percentage of consumption, receive tailored advice for reducing usage, and compare themselves to similar businesses.	Commercial, Industrial			
KCP&L	C&I audits – rebates are offered to customers to cover 50% of the cost of an energy efficiency audit, up to \$300 for customers with less than 25,000 sq. ft. and up to \$500 for customers over that. At least one audit recommendation must be implemented.	Commercial, Industrial			
KCP&L	C&I custom rebates, retrofit – provides individually determined rebates to customers for installing electric savings measures.  Rebates are either a buydown to a two-year payback or 50% of the incremental cost, whichever is less.	Commercial, Industrial			
KCP&L	C&I custom rebates, New Construction – Provides individually determined rebates to customers for installing electric savings measures. Rebates are either a buydown to a two-year payback of 50% of the incremental cost, whichever is less.	Commercial, Industrial			
KCP&L	Building operator certification  – trains facility managers in efficient buildings operation and management. Once sponsors have been secured, the program will offer a Building Operator Training and Certification (BOC) program.	Commercial, Industrial			

Utility Name	Program Description (Type)	Target Market (customer class)	Annual Budget (averaged over program life)	Estimated Annual kW and/or kWh Savings	Estimated kWh Impact (fuel switching, etc.)
KCP&L	A/C cycling – sends a paging signal to a control device attached to an A/C unit to turn the unit off for a period of time during peak demand.	Residential, Small Commercial			
KCP&L	MPower – A load curtailment program paying customers who can provide a load reduction of at least 25 kW during high use periods.	Medium / Large Commercial			
MWE	HVAC sizing	Residential, Commercial	\$57,871	116 kW per year <sup>1</sup> / 208,700 kWh per year <sup>2</sup>	
MWE	Energy audits	Residential, Commercial	\$29,136	99,600 kWh per year <sup>3</sup>	
MWE	Blower door tests	Residential	\$15,511	14,400 kWh per year <sup>4</sup>	
MWE	Home energy rating	Residential	\$19,644	N/A	N/A
MWE	Infrared scans	Residential, Commercial, Industrial	\$10,748	N/A	N/A
MWE	EnergyLine newsletter	Industrial, Commercial	\$5,222	N/A	N/A
MWE	Duct leakage test	Residential, Commercial	\$10,445	14,400 kWh per year <sup>4</sup>	N/A
MWE	How\$mart	Residential, Commercial	\$261,115	Proposed program	Proposed program
MWE	Time-of-day pricing – Offered to all non-residential customers including oil fields and irrigators. Approximately 4% of customers are participating, with great success among irrigators.	Commercial, Industrial			
Westar	Religious institution time-of-day tariff	Other			
Westar	Commercial & Industrial time-of-use tariffs	Commercial, Industrial			
Westar	Website energy audit function  – combines current rates and local ground and air temperature readings to provide energy savings estimates.	Residential			
Westar	Speaker's bureau – provide information on importance of EE at community meetings	Residential, Commercial			
Westar	School Connections - provide EE module in schools	Residential			

 $<sup>^1</sup>$  CP savings = approximately 0.9 kW per ton x 161 units x 0.8 Coincidence Factor = 208,700 kW  $^2$  0.9 kW/unit x 2,880 hours x 0.5 Capacity Factor x 161 units = 208,700 kWh  $^3$  240 kWh per audit x 415 audits = 99,600 kWh  $^4$  240 kWh per test x 60 tests = 14,400 kWh

## **Energy Efficiency/Conservation Program Survey Conducted by Kansas Electric Cooperatives**

1.	Automatic Meter Reading	11
2.	Heat Pump – Sizing	5
3.	Heat Pump – Dual Fuel	2
4.	Heat Pump – Installed	3
5.	Home Energy Audit	9
6.	Home Energy Audit – Blower Door	1
7.	Home Energy Audit – Infrared Camera	1
8.	Home Energy Rating	1
9.	Insulation Installation	1
10.	Low-Income Weatherization Assistance	3
11.	Load Control – Heat Pump	5
12.	Load Control – Air Conditioning	6
13.	Load Control – Ground Source Heat Pump	2
14.	Load Control – Water Heater	4
15.	Low Interest or ERC Loans	4
16.	Rebates – Ground Source Heat Pump	15
17.	Rebates – Air Source Heat Pump	15
18.	Rebates – Other (Water heater, Dual Fuel, etc.)	15
19.	Rebate Programs for Efficient Appliances	1
20.	Consumer Information On Energy Conservation	16
21.	Home Efficiency Seminars	2
22.	Peak Alert Notification	7

## Other Programs:

- Time of use rates.
- Time-of-Use rate.
- We install a "Dencor" device which is time/temperature device on all of our irrigation consumers and we control when the temperature is above 95 degrees and over a tow hour time frame from June 1<sup>st</sup> through Sept. 30<sup>th</sup>. We spread the total control time over a four hour time frame, split into two hour increments by various substations.
- Home Energy Efficiency suite on our website. (Home energy, lighting, appliance and residential energy use calculators) Other information on website includes insulation, house wraps, etc.
- Irrigation load control, irrigation time of use meter.
- Time of use rates.

Please briefly describe the programs checked above or add any additional comments:

- We sponsor the Doug Rye energy talk show, the "king of caulk and talk." This will do more for conservation than anything I have ever seen.
- We are currently developing residential time of use rates.
- Caney Valley offers 5%-interest loans on the installation of ground source heat pumps and other related energy conservation measures done in conjunction with the installation of a heat pump. We also offer rebates on ground source heat pumps, air source heat

pumps, electric heating systems, electric water heaters, ranges and dryers. We also have Marathon water heaters available free to those members replacing a gas or propane unit, or one being installed in new construction.

- DECA supplies or has available information on Energy Conservation to our members. We also advise them of peak periods coming up on our billing cards.
- Load Control also done on commercial accts (oil wells and irrigation).
- We have available a list of Kansas Home Energy Raters for members that are requesting a complete energy audit of their home.
- We work with NECAP on cases that might qualify for Low Income Weatherization Assistance.
- Usage information recorded by the automatic meter reading devices has proved to be very beneficial when dealing with old air conditioner units and equipment added such as additional refrigerators.
- We are in the process of installing Turtle Meters throughout the system (currently 75% complete). We also participate in rebate programs through KEPCo.
- Go to <a href="http://www.mwenergy.com/energyservices.html">http://www.mwenergy.com/energyservices.html</a> and scroll down to services.
- We offer energy audits, but we don't get requests like we used to. We have an employee who visits with the consumer on the phone first, then a lot of the time, the consumer doesn't even want to mess with the audit. When there was a cash or rebate incentive they were interested, but only if someone else was paying for the upgrades. Most of these homes were owned by someone else and the landlord didn't want to make the upgrades necessary.
- 3 PEC employees recently completed the NRECA Residential Auditing Program. PEC refers members to various agencies that assist with weatherization programs. PEC and Sunflower Electric offer rebates for heat pumps and electric water heaters. PEC provides member information on our website.
- Since 1985 we have owned and operated a direct load control program. The backbone of
  our system is a two-way communication system that not only provides real time load
  status but also provides load control capabilities. During summer peak time we control,
  turn off and on, electric water heaters, central air conditioners, irrigation pumps and
  standby generator systems.